
Cardiovascular Disease

PREVIOUSLY HAD A HEART ATTACK

Definition: Respondents who answered “yes” to the question “Has a doctor, nurse, or other health professional ever told you that you had a heart attack or myocardial infarction?”

Prevalence of previously had a heart attack

- South Dakota 4.5%
- There is no nationwide median for previously had a heart attack

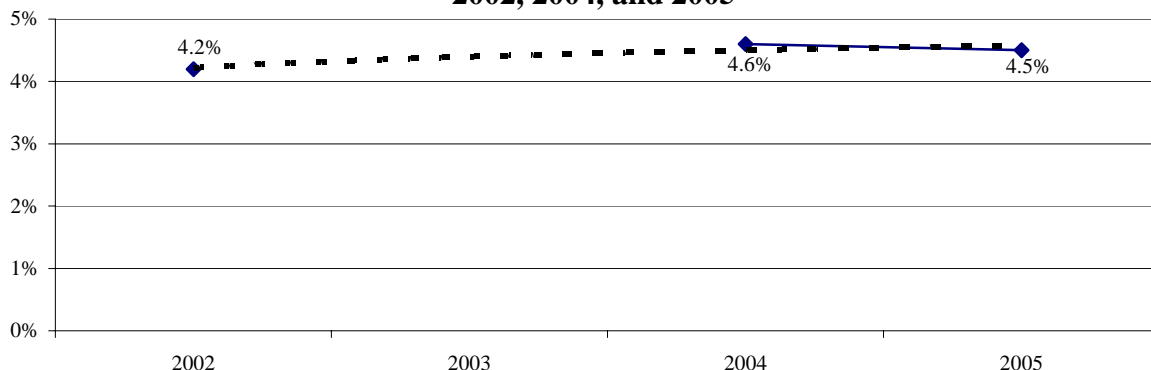
Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for previously had a heart attack.

Trend Analysis

This question was asked in 2002, 2004, and 2005. There was an increase in the percent of respondents who previously had a heart attack from 2002 to 2004 and a slight decrease from 2004 to 2005.

Figure 61
Percent of Respondents Who Previously Had a Heart Attack,
2002, 2004, and 2005



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, 2004, and 2005

Demographics

Gender	A significantly higher prevalence of males have ever been told they had a heart attack than females. This gender difference is evident in specific demographic categories such as those 55 and older, those in the northeast and west regions, and those who are self-employed, retired, or unable to work.
Age	The prevalence of ever having a heart attack increases as age increases with significant increases occurring at the 55-64, 65-74, and 75 and older age groups.
Race	There are no racial differences demonstrated by the available data.
Region	There are no regional differences observed from the available data.

Household Income	The prevalence of ever having a heart attack is significantly lower for those in the higher income groups.
Education	Heart attack prevalence generally decreases as education increases. This association is more evident in females than males.
Employment Status	Those who are retired or unable to work demonstrate a very high prevalence of ever having a heart attack, while those who are employed for wages, unemployed, a homemaker, or a student show a very low prevalence. Females who are self-employed also show a very low prevalence of ever having a heart attack.
Marital Status	Those who are widowed exhibit a very high prevalence of ever having a heart attack, while those who have never been married show a very low prevalence. Also, males who are divorced or separated demonstrate a very high prevalence, while females who are married show a very low prevalence.

Table 78
Respondents Who Previously Had a Heart Attack, 2005

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	6,873	4.5	(4.0-5.0)	2,828	5.8	(5.0-6.7)	4,045	3.2	(2.7-3.7)
Age									
18-24	316	0.0	-	122	0.0	-	194	0.0	-
25-34	869	0.8	(0.3-1.9)	365	0.5	(0.1-2.0)	504	1.1	(0.4-3.3)
35-44	1,135	0.9	(0.4-2.0)	498	1.6	(0.7-3.8)	637	0.2	(0.1-0.8)
45-54	1,352	2.6	(1.8-3.8)	619	3.5	(2.1-5.8)	733	1.7	(1.0-3.0)
55-64	1,163	6.1	(4.8-7.8)	512	9.6	(7.2-12.7)	651	2.5	(1.6-4.0)
65-74	990	11.1	(9.0-13.7)	402	15.9	(12.1-20.7)	588	7.0	(5.0-9.6)
75+	1,008	18.6	(16.0-21.6)	300	26.5	(21.3-32.4)	708	13.6	(11.0-16.7)
Race									
White	6,166	4.3	(3.9-4.9)	2,542	5.5	(4.7-6.5)	3,624	3.2	(2.7-3.8)
American Indian	483	6.7	(4.4-10.1)	193	10.4	(6.1-17.2)	290	3.1	(1.9-5.1)
Region									
Southeast	1,574	3.9	(3.1-4.9)	658	4.8	(3.5-6.5)	916	2.9	(2.1-4.1)
Northeast	1,528	4.8	(3.8-6.0)	595	6.5	(4.8-8.8)	933	3.3	(2.4-4.5)
Central	1,415	5.6	(4.6-6.9)	619	7.1	(5.4-9.2)	796	4.2	(3.0-5.7)
West	1,661	4.5	(3.6-5.6)	662	6.4	(4.8-8.4)	999	2.9	(2.1-3.9)
American Indian Counties	695	4.8	(3.5-6.5)	294	5.4	(3.5-8.3)	401	4.2	(2.7-6.3)
Household Income									
Less than \$10,000	356	10.4	(7.4-14.3)	*	*	*	*	*	*
\$10,000-\$14,999	459	12.6	(9.3-16.9)	131	16.5	(9.8-26.4)	328	10.0	(7.2-13.8)
\$15,000-\$19,999	476	8.6	(6.2-11.8)	178	14.7	(9.8-21.3)	298	4.1	(2.3-7.2)
\$20,000-\$24,999	634	6.1	(4.4-8.5)	246	7.6	(4.8-11.9)	388	5.0	(3.1-7.8)
\$25,000-\$34,999	950	4.8	(3.6-6.6)	414	6.9	(4.7-10.0)	536	2.7	(1.6-4.4)
\$35,000-\$49,999	1,227	3.0	(2.2-4.1)	561	4.4	(3.1-6.4)	666	1.4	(0.8-2.6)
\$50,000-\$74,999	1,032	2.2	(1.5-3.4)	496	3.4	(2.1-5.4)	536	0.9	(0.4-2.0)
\$75,000+	874	2.4	(1.5-3.7)	468	3.0	(1.8-4.9)	406	1.4	(0.5-3.9)
Education									
8th Grade or Less	321	16.4	(12.1-21.9)	152	21.6	(14.9-30.3)	169	10.2	(6.1-16.5)
Some High School	399	5.3	(3.3-8.6)	175	6.4	(3.3-12.3)	224	3.9	(2.2-6.8)
High School or G.E.D.	2,182	6.4	(5.4-7.6)	954	8.3	(6.6-10.3)	1,228	4.4	(3.4-5.7)
Some Post-High School	1,977	3.0	(2.4-3.8)	717	3.2	(2.2-4.6)	1,260	2.9	(2.1-4.0)
College Graduate	1,987	2.5	(1.9-3.3)	827	3.6	(2.6-5.1)	1,160	1.5	(0.9-2.3)
Employment Status									
Employed for Wages	3,352	1.4	(1.0-1.9)	1,380	1.9	(1.3-2.8)	1,972	0.9	(0.5-1.5)
Self-employed	902	4.0	(2.7-5.8)	600	5.4	(3.7-8.0)	302	0.7	(0.2-2.1)
Unemployed	169	2.7	(1.1-6.4)	*	*	*	*	*	*
Homemaker	410	2.6	(1.6-4.3)	*	*	*	*	*	*
Student	125	0.7	(0.2-2.8)	*	*	*	*	*	*
Retired	1,631	15.4	(13.4-17.6)	602	20.0	(16.6-23.9)	1,029	11.6	(9.6-14.0)
Unable to Work	280	15.3	(11.3-20.3)	120	23.0	(15.9-32.1)	160	8.5	(5.1-13.8)

Table 78 (continued)
Respondents Who Previously Had a Heart Attack, 2005

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Marital Status									
Married/Unmarried Couple	4,133	4.1	(3.5-4.7)	1,850	6.1	(5.1-7.3)	2,283	2.0	(1.5-2.7)
Divorced/Separated	952	6.7	(5.1-8.8)	395	10.0	(7.0-14.0)	557	4.1	(2.7-6.2)
Widowed	963	14.2	(11.7-17.1)	161	20.7	(13.5-30.3)	802	12.6	(10.2-15.4)
Never Married	814	1.0	(0.6-1.6)	418	1.1	(0.6-2.2)	396	0.8	(0.4-1.7)

Note: *Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2005

Further Analysis

Following are data illustrating the percent of those who previously had a heart attack for various health behaviors and conditions. For example, 12.0 percent of respondents who stated they have hypertension stated they previously had a heart attack, while 1.9 percent of respondents who stated they have no hypertension status stated they had a heart attack.

Table 79
Previously Had a Heart Attack for Selected Health Behaviors and Conditions, 2005

Health Behavior or Condition	# Respondents	% Had Heart Attack	95% CI
Fair or Poor Health Status	1,112	17.3	14.9-19.9
Excellent, Very Good, or Good Health Status	5,754	2.6	2.2-3.1
Physical Health Not Good for 30 days of the past 30	510	17.1	13.8-21.0
Physical Health Not Good for 0-29 days of the past 30	6,298	3.6	3.2-4.1
Mental Health Not Good for 20-30 days of the past 30	354	6.8	4.3-10.7
Mental Health Not Good for 0-19 days of the past 30	6,475	4.3	3.8-4.8
Usual Activities Unattainable for 10-30 Days of the Past 30	457	14.0	10.8-17.9
Usual Activities Unattainable for 0-9 Days of the Past 30	6,378	3.9	3.4-4.4
Dissatisfied / Very Dissatisfied with Life	269	7.2	4.2-11.9
Satisfied / Very Satisfied with Life	6,402	4.3	3.8-4.8
Obese (BMI = 30.0+)	1,761	5.5	4.4-6.7
Overweight (BMI = 25.0-29.9)	2,542	5.0	4.2-5.9
Recommended Weight (BMI = 18.5-24.9)	2,198	3.4	2.7-4.3
Underweight (BMI < 18.5)	103	3.2	1.4-6.8
No Leisure Time Physical Activity	1,764	7.1	5.9-8.6
Leisure Time Physical Activity	5,108	3.7	3.2-4.3
No Moderate Physical Activity	3,581	5.4	4.7-6.2
Moderate Physical Activity	2,942	3.2	2.6-3.9
No Vigorous Physical Activity	5,371	5.0	4.4-5.6
Vigorous Physical Activity	1,280	2.6	1.8-3.6
Less Than Five Servings of Fruits and Vegetables	5,207	4.1	3.6-4.7
At Least Five Servings of Fruits and Vegetables	1,583	5.8	4.7-7.3
Not Heard of "Healthy South Dakota" Program	4,452	4.0	3.5-4.7
Heard of "Healthy South Dakota" Program	2,124	5.4	4.5-6.4
Current Smoker	1,307	3.4	2.5-4.6
Former Smoker	1,921	8.7	7.4-10.1
Never Smoked	3,627	2.9	2.4-3.5
Smokeless Tobacco Use	360	2.6	1.5-4.5
No Smokeless Tobacco Use	6,304	4.6	4.1-5.1
Drank Alcohol in Past 30 Days	3,667	2.8	2.3-3.4
No Alcohol in Past 30 Days	3,194	6.9	6.0-7.9

Table 79 (continued)			
Previously Had a Heart Attack for Selected Health Behaviors and Conditions, 2005			
Health Behavior or Condition	# Respondents	% Had Heart Attack	95% CI
Binge Drinker	910	1.2	0.7-2.2
Not a Binge Drinker	5,893	5.2	4.7-5.9
Heavy Drinker	236	1.2	0.5-3.3
Not a Heavy Drinker	6,530	4.6	4.1-5.2
Hypertension	2,206	12.0	10.5-13.6
No Hypertension	4,661	1.9	1.6-2.4
High Blood Cholesterol	2,078	10.7	9.3-12.3
No High Blood Cholesterol	3,416	3.4	2.8-4.1
Not Taking any Precautions Against West Nile Virus	2,096	6.0	5.0-7.2
Taking Precautions Against West Nile Virus	4,539	3.7	3.2-4.3
No Health Insurance (18-64)	411	1.8	0.7-4.5
Health Insurance (18-64)	4,227	1.9	1.5-2.4
Employer Based Health Insurance Coverage (18-64)	2,775	1.2	0.9-1.8
Private Health Insurance Plan (18-64)	639	1.5	0.8-2.7
Medicare (18-64)	145	12.2	7.6-19.0
Medicaid or Medical Assistance (18-64)	182	3.8	1.9-7.2
The Military, CHAMPUS, TriCare, or the VA (18-64)	211	4.2	2.3-7.7
The Indian Health Service (18-64)	225	2.9	1.3-6.3
No Flu Shot (65+)	497	11.9	8.7-16.0
Flu Shot (65+)	1,495	16.1	14.0-18.4
No Pneumonia Shot (65+)	648	10.1	7.5-13.3
Pneumonia Shot (65+)	1,286	17.4	15.1-20.0
Diabetes	598	16.5	13.4-20.1
No Diabetes	6,274	3.6	3.2-4.1
Current Asthma	510	6.4	4.7-8.6
Former Asthma	175	4.8	2.3-9.8
Never Had Asthma	6,157	4.3	3.8-4.9
Have Angina or Coronary Heart Disease	435	49.1	43.6-54.6
Do Not Have Angina or Coronary Heart Disease	6,389	2.2	1.9-2.6
Previously Had a Stroke	254	27.3	21.2-34.5
Never Had a Stroke	6,610	3.8	3.3-4.3
Arthritis	2,402	9.7	8.5-11.1
No Arthritis	4,400	2.4	2.0-2.9
Arthritis - Activities Limited	1,150	11.2	9.3-13.4
No Arthritis - Activities Limited	5,648	3.3	2.9-3.8
Physical, Mental, or Emotional Disability	1,569	11.5	9.9-13.3
No Physical, Mental, or Emotional Disability	5,268	2.8	2.4-3.3
Disability with Special Equipment Needed	592	19.9	16.2-24.1
No Disability with Special Equipment Needed	6,251	3.5	3.0-4.0
Two or More Hours of TV Watched per Day	4,831	5.2	4.6-5.9
Less Than Two Hours of TV Watched per Day	1,773	2.5	1.9-3.4
Never Been Tested for HIV (18-64)	3,483	1.8	1.4-2.3
Been Tested for HIV (18-64)	1,153	1.9	1.2-2.9
Military Veteran	1,119	11.1	9.3-13.2
Not a Military Veteran	5,736	3.2	2.8-3.7

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2005

ANGINA OR CORONARY HEART DISEASE

Definition: Respondents who answered “yes” to the question “Has a doctor, nurse, or other health professional ever told you that you have angina or coronary heart disease?”

Prevalence of angina or coronary heart disease

- South Dakota 4.4%
- There is no nationwide median for having angina or coronary heart disease

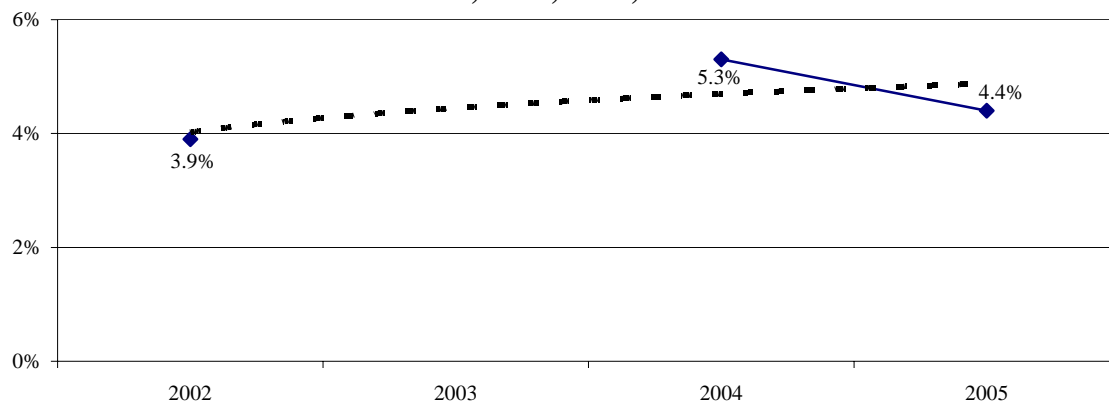
Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for having angina or coronary heart disease.

Trend Analysis

This question was asked in 2002, 2004, and 2005. There was an increase in the percent of respondents who stated they have been told they have angina or coronary heart disease from 2002 to 2004 and a notable decrease from 2004 to 2005.

Figure 62
Percent of Respondents Who Have Angina or Coronary Heart Disease, 2002, 2004, and 2005



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, 2004, and 2005

Demographics

- Gender** There is no overall gender difference observed from the available data. However, males who are self-employed or married do demonstrate a significantly higher prevalence of heart disease than females in the same demographic categories.
- Age** The prevalence of ever having been told they have heart disease generally increases as age increases with significant increases occurring at the 55-64 and 65-74 age groups. However, females do not show a significant increase until the 75 and older age group is reached.
- Race** There are no racial differences demonstrated by the available data.
- Region** Those in the central region exhibit a very high prevalence of heart disease, while those in the southeast region show a very low prevalence. This regional variation are more evident in males than females.

Household Income	The prevalence of ever having been told they have heart disease generally decreases as household income increases. This association is more evident in females than males.
Education	Heart disease prevalence decreases as education increases. This includes a significant decrease as the some high school and some post-high school education levels are obtained.
Employment Status	Those who are retired or unable to work demonstrate a very high prevalence of heart disease, while those who are employed for wages, unemployed, or a student show a very low prevalence. Also, females who are self-employed exhibit a very low prevalence of heart disease.
Marital Status	Those who are widowed exhibit a very high prevalence of ever having been told they have heart disease, while those who have never been married show a very low prevalence. Also, females who are married demonstrate a very low prevalence.

Table 80
Respondents Who Have Angina or Coronary Heart Disease, 2005

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	6,856	4.4	(4.0-4.9)	2,818	4.7	(4.1-5.5)	4,038	4.1	(3.5-4.8)
Age									
18-24	318	0.3	(0.0-2.0)	124	0.0	-	194	0.6	(0.1-4.1)
25-34	868	0.2	(0.1-0.9)	366	0.0	-	502	0.5	(0.1-1.9)
35-44	1,134	1.1	(0.6-1.9)	496	1.2	(0.5-2.6)	638	1.0	(0.4-2.3)
45-54	1,350	2.4	(1.6-3.5)	617	2.1	(1.2-3.7)	733	2.7	(1.6-4.4)
55-64	1,160	6.9	(5.4-8.8)	510	8.2	(5.9-11.2)	650	5.6	(3.9-8.1)
65-74	988	12.4	(10.2-15.0)	400	16.9	(13.1-21.6)	588	8.5	(6.3-11.2)
75+	999	17.1	(14.6-19.8)	296	20.4	(15.9-25.7)	703	15.0	(12.3-18.2)
Race									
White	6151	4.4	(3.9-4.9)	2,534	4.7	(4.0-5.6)	3,617	4.0	(3.4-4.7)
American Indian	486	6.7	(4.4-10.1)	195	5.8	(3.4-9.8)	291	7.6	(4.1-13.7)
Region									
Southeast	1,568	3.4	(2.7-4.3)	653	3.7	(2.6-5.1)	915	3.1	(2.3-4.3)
Northeast	1,529	4.9	(4.0-6.1)	593	4.6	(3.2-6.4)	936	5.2	(4.0-6.8)
Central	1,405	6.4	(5.2-7.9)	613	6.9	(5.3-9.0)	792	5.9	(4.2-8.3)
West	1,655	4.6	(3.7-5.7)	661	5.6	(4.2-7.4)	994	3.7	(2.7-5.0)
American Indian Counties	699	5.2	(3.7-7.2)	298	5.8	(3.7-8.9)	401	4.6	(2.8-7.3)
Household Income									
Less than \$10,000	352	8.0	(5.4-11.7)	*	*	*	*	*	*
\$10,000-\$14,999	459	11.1	(8.3-14.7)	131	10.1	(5.8-17.1)	328	11.7	(8.5-15.9)
\$15,000-\$19,999	472	9.6	(7.1-12.7)	177	13.1	(8.8-19.0)	295	7.0	(4.5-10.7)
\$20,000-\$24,999	635	7.7	(5.6-10.4)	248	8.6	(5.6-13.1)	387	6.9	(4.4-10.6)
\$25,000-\$34,999	946	5.6	(4.3-7.4)	409	5.8	(3.9-8.5)	537	5.5	(3.7-8.0)
\$35,000-\$49,999	1,224	3.8	(2.8-5.0)	559	5.0	(3.5-7.1)	665	2.4	(1.4-4.0)
\$50,000-\$74,999	1,033	1.9	(1.2-2.8)	496	2.4	(1.4-3.8)	537	1.3	(0.6-2.9)
\$75,000+	873	1.7	(1.0-2.7)	467	2.0	(1.1-3.5)	406	1.2	(0.5-2.6)
Education									
8th Grade or Less	314	16.5	(12.2-22.0)	150	20.3	(13.8-28.8)	164	11.9	(7.2-18.9)
Some High School	397	6.4	(4.3-9.5)	173	4.7	(2.5-8.8)	224	8.7	(5.2-14.0)
High School or G.E.D.	2,183	5.7	(4.8-6.8)	954	6.2	(4.8-7.8)	1,229	5.3	(4.2-6.8)
Some Post-High School	1,971	3.1	(2.5-3.9)	713	3.1	(2.1-4.4)	1,258	3.1	(2.3-4.2)
College Graduate	1,982	2.8	(2.2-3.6)	824	3.0	(2.1-4.3)	1,158	2.6	(1.8-3.7)

Table 80 (continued)
Respondents Who Have Angina or Coronary Heart Disease, 2005

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Employment Status									
Employed for Wages	3,352	1.4	(1.0-1.8)	1,381	1.4	(1.0-2.1)	1,971	1.3	(0.8-1.9)
Self-employed	900	3.0	(2.0-4.4)	598	3.9	(2.6-5.9)	302	1.1	(0.4-2.5)
Unemployed	169	2.2	(0.9-4.9)	*	*	*	*	*	*
Homemaker	411	3.3	(2.0-5.2)	*	*	*	*	*	*
Student	124	1.6	(0.4-5.9)	*	*	*	*	*	*
Retired	1,618	15.2	(13.3-17.3)	595	17.3	(14.2-21.0)	1,023	13.4	(11.3-16.0)
Unable to Work	279	18.2	(13.6-24.0)	118	21.9	(14.6-31.6)	161	15.1	(9.7-22.6)
Marital Status									
Married/Unmarried Couple	4,123	3.9	(3.3-4.5)	1,844	5.0	(4.1-6.1)	2,279	2.7	(2.1-3.5)
Divorced/Separated	948	7.2	(5.4-9.5)	392	7.7	(5.3-11.1)	556	6.7	(4.4-10.2)
Widowed	959	14.4	(12.1-17.1)	160	18.1	(12.6-25.5)	799	13.5	(11.0-16.4)
Never Married	815	1.3	(0.8-2.1)	418	1.0	(0.5-2.0)	397	1.7	(0.8-3.6)

Note: *Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2005

Further Analysis

Following are data illustrating the percent of those who have angina or coronary heart disease for various health behaviors and conditions. For example, 8.2 percent of respondents who stated they were a former smoker have angina or coronary heart disease, while 3.0 percent of respondents who stated they never smoked have angina or coronary heart disease.

Table 81
Have Angina or Coronary Heart Disease for Selected Health Behaviors and Conditions, 2005

Health Behavior or Condition	# Respondents	% Heart Disease	95% CI
Fair or Poor Health Status	1,100	16.2	13.9-18.7
Excellent, Very Good, or Good Health Status	5,749	2.7	2.4-3.2
Physical Health Not Good for 30 days of the past 30	506	18.3	14.9-22.3
Physical Health Not Good for 0-29 days of the past 30	6,283	3.6	3.1-4.1
Mental Health Not Good for 20-30 days of the past 30	351	6.3	4.1-9.4
Mental Health Not Good for 0-19 days of the past 30	6,460	4.3	3.9-4.9
Usual Activities Unattainable for 10-30 Days of the Past 30	454	15.3	12.0-19.4
Usual Activities Unattainable for 0-9 Days of the Past 30	6,364	3.8	3.3-4.3
Dissatisfied / Very Dissatisfied with Life	266	7.6	4.7-12.0
Satisfied / Very Satisfied with Life	6,385	4.4	3.9-4.9
Obese (BMI = 30.0+)	1,760	4.8	3.9-5.9
Overweight (BMI = 25.0-29.9)	2,525	5.1	4.4-6.1
Recommended Weight (BMI = 18.5-24.9)	2,203	3.7	3.0-4.5
Underweight (BMI < 18.5)	101	2.5	1.0-6.1
No Leisure Time Physical Activity	1,754	7.1	5.9-8.4
Leisure Time Physical Activity	5,101	3.7	3.2-4.2
No Moderate Physical Activity	3,575	5.3	4.6-6.1
Moderate Physical Activity	2,934	3.6	3.0-4.3
No Vigorous Physical Activity	5,355	5.0	4.5-5.7
Vigorous Physical Activity	1,279	2.6	1.9-3.5
Less Than Five Servings of Fruits and Vegetables	5,183	4.0	3.5-4.6
At Least Five Servings of Fruits and Vegetables	1,588	6.0	5.0-7.3
Not Heard of "Healthy South Dakota" Program	4,438	4.3	3.7-4.9
Heard of "Healthy South Dakota" Program	2,120	5.1	4.2-6.1

Table 81 (continued)			
Have Angina or Coronary Heart Disease for Selected Health Behaviors and Conditions, 2005			
Health Behavior or Condition	# Respondents	% Heart Disease	95% CI
Current Smoker	1,305	3.5	2.7-4.7
Former Smoker	1,909	8.2	7.0-9.5
Never Smoked	3,623	3.0	2.5-3.6
Smokeless Tobacco Use	361	1.9	1.0-3.5
No Smokeless Tobacco Use	6,285	4.7	4.2-5.2
Drank Alcohol in Past 30 Days	3,662	2.8	2.3-3.4
No Alcohol in Past 30 Days	3,183	6.8	5.9-7.7
Binge Drinker	907	0.9	0.5-1.6
Not a Binge Drinker	5,880	5.3	4.7-5.9
Heavy Drinker	235	1.6	0.6-3.9
Not a Heavy Drinker	6,515	4.6	4.1-5.1
Hypertension	2,192	11.5	10.1-13.0
No Hypertension	4,658	2.1	1.7-2.5
High Blood Cholesterol	2,065	10.6	9.2-12.1
No High Blood Cholesterol	3,413	3.4	2.8-4.0
Not Taking any Precautions Against West Nile Virus	2,090	5.6	4.7-6.7
Taking Precautions Against West Nile Virus	4,527	4.0	3.5-4.6
No Health Insurance (18-64)	411	2.5	1.4-4.3
Health Insurance (18-64)	4,222	2.0	1.6-2.5
Employer Based Health Insurance Coverage (18-64)	2,771	1.2	0.9-1.7
Private Health Insurance Plan (18-64)	637	2.0	1.1-3.4
Medicare (18-64)	142	17.5	11.0-26.7
Medicaid or Medical Assistance (18-64)	181	3.4	1.4-8.1
The Military, CHAMPUS, TriCare, or the VA (18-64)	213	3.6	1.9-6.7
The Indian Health Service (18-64)	228	2.0	0.9-4.7
No Flu Shot (65+)	496	12.0	9.1-15.7
Flu Shot (65+)	1,486	15.7	13.8-18.0
No Pneumonia Shot (65+)	644	10.7	8.3-13.8
Pneumonia Shot (65+)	1,282	16.9	14.7-19.3
Diabetes	596	13.1	10.3-16.4
No Diabetes	6,259	3.8	3.4-4.3
Current Asthma	507	7.7	5.7-10.5
Former Asthma	173	5.1	2.7-9.4
Never Had Asthma	6,147	4.1	3.7-4.6
Previously Had a Heart Attack	415	50.0	44.2-55.8
Never Had a Heart Attack	6,409	2.3	2.0-2.7
Previously Had a Stroke	251	26.8	20.7-33.9
Never Had a Stroke	6,593	3.8	3.3-4.2
Arthritis	2,394	10.4	9.1-11.8
No Arthritis	4,389	2.2	1.8-2.6
Arthritis - Activities Limited	1,148	12.4	10.4-14.7
No Arthritis - Activities Limited	5,631	3.1	2.7-3.6
Physical, Mental, or Emotional Disability	1,559	12.3	10.6-14.2
No Physical, Mental, or Emotional Disability	5,259	2.6	2.2-3.0
Disability with Special Equipment Needed	592	16.8	13.7-20.4
No Disability with Special Equipment Needed	6,232	3.6	3.2-4.1
Two or More Hours of TV Watched per Day	4,819	5.4	4.8-6.1
Less Than Two Hours of TV Watched per Day	1,769	2.3	1.8-3.1
Never Been Tested for HIV (18-64)	3,479	1.8	1.5-2.3
Been Tested for HIV (18-64)	1,149	2.2	1.5-3.3
Military Veteran	1,116	9.7	8.1-11.7
Not a Military Veteran	5,721	3.4	3.0-3.9

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2005

PREVIOUSLY HAD A STROKE

Definition: Respondents who answered “yes” to the question “Has a doctor, nurse, or other health professional ever told you that you have previously had a stroke?”

Prevalence of previously had a stroke

- South Dakota 2.8%
- There is no nationwide median for previously had a stroke

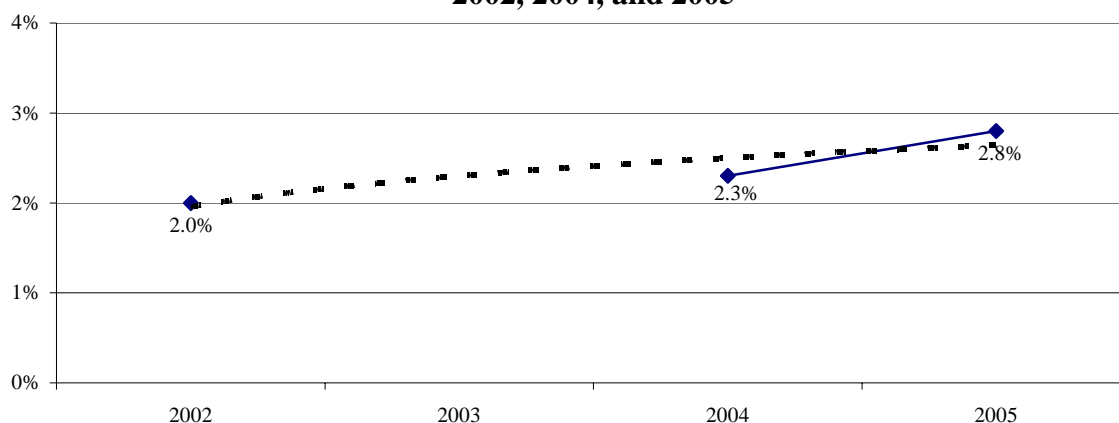
Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for previously had a stroke.

Trend Analysis

This question was asked in 2002, 2004, and 2005. The percent of respondents who stated they have previously had a stroke has been increasing since the question was first asked in 2002.

Figure 63
Percent of Respondents Who Have Previously Had a Stroke,
2002, 2004, and 2005



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, 2004, and 2005

Demographics

Gender	There is no gender difference exhibited by the available data for ever having had a stroke.
Age	The prevalence of ever having had a stroke generally increases as age increases. This includes a significant increase when the 65-74 age group is reached. However, males also show a significant increase as the 55-64 age group is reached, and females also exhibit a significant increase when the 75 and older age group is reached.
Race	There are no racial differences demonstrated by the available data.
Region	There are no regional differences observed from the available data.

Household Income	The prevalence of ever having had a stroke is significantly lower for those in higher income groups. This is especially true for females.
Education	Stroke prevalence decreases as education increases.
Employment Status	Those who are unable to work demonstrate a very high prevalence of ever having had a stroke, while those who are employed for wages, self-employed, or a student show a very low prevalence. Also, males who are retired exhibit a very high prevalence of stroke.
Marital Status	Those who are widowed exhibit a very high prevalence of ever having had a stroke, while those who are married or have never been married show a very low prevalence.

Table 82
Respondents Who Previously Had a Stroke, 2005

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	6,899	2.8	(2.4-3.3)	2,838	2.7	(2.0-3.5)	4,061	2.9	(2.4-3.5)
Age									
18-24	319	1.3	(0.4-4.7)	125	1.9	(0.3-9.3)	194	0.8	(0.2-3.5)
25-34	870	0.5	(0.2-1.3)	366	0.2	(0.0-1.6)	504	0.7	(0.2-2.3)
35-44	1,136	0.9	(0.4-2.0)	498	0.9	(0.3-3.2)	638	0.9	(0.3-2.6)
45-54	1,354	1.4	(0.9-2.2)	622	0.5	(0.2-1.2)	732	2.4	(1.4-3.9)
55-64	1,165	2.6	(1.7-4.0)	512	3.2	(1.7-5.7)	653	2.0	(1.2-3.6)
65-74	997	7.6	(5.9-9.7)	404	10.2	(7.2-14.2)	593	5.3	(3.7-7.5)
75+	1,018	10.8	(8.8-13.2)	301	10.2	(7.0-14.6)	717	11.2	(8.7-14.2)
Race									
White	6,185	2.9	(2.4-3.4)	2,548	2.9	(2.2-3.8)	3,637	2.9	(2.4-3.6)
American Indian	489	2.6	(1.6-4.3)	196	1.2	(0.5-2.7)	293	4.1	(2.3-7.3)
Region									
Southeast	1,577	2.9	(2.1-4.0)	658	3.1	(1.8-5.1)	919	2.8	(1.9-4.0)
Northeast	1,534	2.8	(2.1-3.6)	596	2.2	(1.4-3.5)	938	3.2	(2.3-4.5)
Central	1,419	3.0	(2.2-4.0)	620	3.1	(2.1-4.8)	799	2.9	(1.9-4.3)
West	1,666	2.6	(2.0-3.5)	666	2.4	(1.5-3.7)	1,000	2.9	(2.1-4.0)
American Indian Counties	703	2.5	(1.4-4.4)	298	2.0	(0.7-5.7)	405	3.0	(1.6-5.6)
Household Income									
Less than \$10,000	359	6.7	(4.6-9.9)	101	3.8	(1.4-9.8)	258	8.1	(5.3-12.2)
\$10,000-\$14,999	466	8.1	(5.3-12.1)	132	5.3	(1.9-14.0)	334	10.0	(6.6-14.9)
\$15,000-\$19,999	477	7.0	(4.8-10.2)	178	10.8	(6.6-17.2)	299	4.3	(2.3-7.8)
\$20,000-\$24,999	638	4.3	(2.9-6.4)	248	6.1	(3.6-10.3)	390	2.8	(1.6-5.0)
\$25,000-\$34,999	952	2.7	(1.8-4.1)	414	2.1	(1.1-4.0)	538	3.3	(1.9-5.7)
\$35,000-\$49,999	1,229	1.7	(1.1-2.5)	563	2.1	(1.2-3.5)	666	1.2	(0.6-2.5)
\$50,000-\$74,999	1,033	0.5	(0.2-1.2)	497	0.4	(0.1-1.6)	536	0.7	(0.3-1.8)
\$75,000+	874	0.8	(0.4-1.8)	468	0.7	(0.2-1.8)	406	1.1	(0.3-3.3)
Education									
8th Grade or Less	322	11.4	(7.7-16.8)	151	13.8	(8.3-21.9)	171	8.6	(4.4-16.3)
Some High School	402	6.3	(3.2-11.9)	176	7.9	(3.1-18.4)	226	4.2	(2.3-7.5)
High School or G.E.D.	2,197	3.2	(2.6-4.1)	961	2.9	(2.0-4.2)	1,236	3.6	(2.6-4.8)
Some Post-High School	1,981	2.2	(1.6-2.9)	718	1.3	(0.7-2.3)	1,263	2.9	(2.1-4.0)
College Graduate	1,988	1.4	(1.0-2.0)	828	1.1	(0.6-2.0)	1,160	1.6	(1.0-2.6)
Employment Status									
Employed for Wages	3,360	0.7	(0.5-1.0)	1,385	0.6	(0.3-1.1)	1,975	0.8	(0.5-1.4)
Self-employed	903	1.1	(0.4-2.5)	601	1.5	(0.6-3.7)	302	0.0	
Unemployed	171	5.2	(1.2-20.1)	*	*	*	*	*	*
Homemaker	411	2.3	(1.3-4.4)	*	*	*	*	*	*
Student	126	0.5	(0.1-3.7)	*	*	*	*	*	*
Retired	1,644	8.8	(7.3-10.5)	604	8.3	(6.1-11.2)	1,040	9.1	(7.3-11.4)
Unable to Work	280	17.7	(12.9-23.8)	119	17.9	(11.1-27.5)	161	17.6	(11.5-25.9)

Table 82 (continued)									
Respondents Who Previously Had a Stroke, 2005									
	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Marital Status									
Married/Unmarried Couple	4,142	2.2	(1.8-2.7)	1,856	2.5	(1.9-3.3)	2,286	1.9	(1.4-2.6)
Divorced/Separated	955	3.9	(2.8-5.5)	396	3.7	(2.1-6.3)	559	4.1	(2.7-6.4)
Widowed	972	9.9	(8.0-12.2)	160	9.9	(6.1-15.8)	812	9.9	(7.8-12.5)
Never Married	819	1.9	(0.8-4.3)	422	2.1	(0.6-6.5)	397	1.6	(0.6-3.8)

Note: *Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2005

Further Analysis

Following are data illustrating the percent of those who previously had a stroke for various health behaviors and conditions. For example, 10.0 percent of respondents who stated they have diabetes previously had a stroke, while 2.3 percent of respondents who stated they do not have diabetes previously had a stroke.

Table 83 Previously Had a Stroke for Selected Health Behaviors and Conditions, 2005			
Health Behavior or Condition	# Respondents	% Had Stroke	95% CI
Fair or Poor Health Status	1,123	12.3	9.8-15.2
Excellent, Very Good, or Good Health Status	5,769	1.4	1.2-1.8
Physical Health Not Good for 30 days of the past 30	517	12.2	9.3-15.9
Physical Health Not Good for 0-29 days of the past 30	6,314	2.1	1.8-2.6
Mental Health Not Good for 20-30 days of the past 30	357	7.3	4.6-11.3
Mental Health Not Good for 0-19 days of the past 30	6,497	2.5	2.1-3.0
Usual Activities Unattainable for 10-30 Days of the Past 30	461	12.7	9.5-16.9
Usual Activities Unattainable for 0-9 Days of the Past 30	6,401	2.2	1.8-2.7
Dissatisfied / Very Dissatisfied with Life	268	6.5	3.7-11.3
Satisfied / Very Satisfied with Life	6,425	2.6	2.2-3.1
Obese (BMI = 30.0+)	1,774	3.4	2.6-4.4
Overweight (BMI = 25.0-29.9)	2,546	2.5	2.0-3.2
Recommended Weight (BMI = 18.5-24.9)	2,205	2.6	1.8-3.7
Underweight (BMI < 18.5)	103	1.7	0.7-4.5
No Leisure Time Physical Activity	1,773	5.2	4.2-6.4
Leisure Time Physical Activity	5,125	2.1	1.7-2.7
No Moderate Physical Activity	3,597	3.3	2.8-4.0
Moderate Physical Activity	2,947	2.2	1.6-3.1
No Vigorous Physical Activity	5,394	3.1	2.7-3.6
Vigorous Physical Activity	1,281	1.8	0.9-3.6
Less Than Five Servings of Fruits and Vegetables	5,221	2.7	2.2-3.3
At Least Five Servings of Fruits and Vegetables	1,593	3.2	2.4-4.2
Not Heard of "Healthy South Dakota" Program	4,470	2.7	2.1-3.3
Heard of "Healthy South Dakota" Program	2,131	3.1	2.4-3.9
Current Smoker	1,310	3.3	2.1-5.1
Former Smoker	1,931	3.9	3.1-4.9
Never Smoked	3,639	2.2	1.7-2.7
Smokeless Tobacco Use	361	3.2	0.9-10.2
No Smokeless Tobacco Use	6,327	2.8	2.4-3.2
Drank Alcohol in Past 30 Days	3,670	1.5	1.1-2.1
No Alcohol in Past 30 Days	3,217	4.6	3.9-5.5
Binge Drinker	910	1.3	0.5-3.7
Not a Binge Drinker	5,919	3.1	2.7-3.7

Table 83 (continued) Previously Had a Stroke for Selected Health Behaviors and Conditions, 2005			
Health Behavior or Condition	# Respondents	% Had Stroke	95% CI
Heavy Drinker	237	4.3	1.1-14.8
Not a Heavy Drinker	6,555	2.7	2.3-3.2
Hypertension	2,219	6.9	5.8-8.2
No Hypertension	4,672	1.4	1.0-1.9
High Blood Cholesterol	2,090	5.4	4.4-6.6
No High Blood Cholesterol	3,429	2.2	1.8-2.8
Not Taking any Precautions Against West Nile Virus	2,103	4.3	3.2-5.6
Taking Precautions Against West Nile Virus	4,556	2.1	1.8-2.6
No Health Insurance (18-64)	413	1.3	0.4-3.9
Health Insurance (18-64)	4,233	1.2	0.8-1.7
Employer Based Health Insurance Coverage (18-64)	2,776	0.4	0.2-0.8
Private Health Insurance Plan (18-64)	640	1.0	0.5-2.3
Medicare (18-64)	143	12.1	6.9-20.5
Medicaid or Medical Assistance (18-64)	182	7.7	3.0-18.3
The Military, CHAMPUS, TriCare, or the VA (18-64)	213	0.0	-
The Indian Health Service (18-64)	228	1.7	0.6-5.0
No Flu Shot (65+)	499	7.1	4.9-10.2
Flu Shot (65+)	1,510	9.9	8.2-11.8
No Pneumonia Shot (65+)	651	5.2	3.6-7.4
Pneumonia Shot (65+)	1,300	11.4	9.5-13.6
Diabetes	609	10.0	7.7-12.9
No Diabetes	6,289	2.3	1.9-2.8
Current Asthma	510	5.3	3.7-7.7
Former Asthma	177	2.0	0.8-4.8
Never Had Asthma	6,182	2.6	2.2-3.1
Previously Had a Heart Attack	434	17.1	13.3-21.8
Never Had a Heart Attack	6,430	2.1	1.7-2.6
Have Angina or Coronary Heart Disease	442	17.0	13.2-21.5
Do Not Have Angina or Coronary Heart Disease	6,402	2.1	1.7-2.6
Arthritis	2,414	6.5	5.5-7.8
No Arthritis	4,412	1.4	1.0-1.9
Arthritis - Activities Limited	1,158	9.0	7.1-11.2
No Arthritis - Activities Limited	5,663	1.8	1.5-2.3
Physical, Mental, or Emotional Disability	1,578	9.9	8.1-12.2
No Physical, Mental, or Emotional Disability	5,283	1.2	0.9-1.5
Disability with Special Equipment Needed	599	16.9	13.4-21.1
No Disability with Special Equipment Needed	6,268	1.9	1.5-2.3
Two or More Hours of TV Watched per Day	4,851	3.5	3.0-4.2
Less Than Two Hours of TV Watched per Day	1,777	0.9	0.6-1.5
Never Been Tested for HIV (18-64)	3,489	1.1	0.7-1.5
Been Tested for HIV (18-64)	1,153	1.0	0.5-1.9
Military Veteran	1,124	4.7	3.6-6.2
Not a Military Veteran	5,756	2.5	2.0-3.0

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2005